TITLE Coal/Polymer Coprocessing with Efficient Use of Hydrogen

AUTHORS Linda J. Broadbelt* and Matthew J. De Witt
email: broadbelt@nwu.edu
phone: 847/491-5351
fax: 847/491-3728
Northwestern University
2145 Sheridan Road
Department of Chemical Engineering
Evanston, IL 60208

MANUSCRIPTS

De Witt, M.J., Dooling, D.J. and Broadbelt, L.J., "Computer Generation of Reaction Mechanisms Using Quantitative Rate Information: Application to Long-Chain Hydrocarbon Pyrolysis", Proceedings of the American Institute of Chemical Engineers, Houston, TX, **1999**.

De Witt, M.J. and Broadbelt, L.J., "Coprocessing of Polymeric Waste with Coal: Reaction of Polyethylene and Coal Model Compounds", Preprints of the American Chemical Society, Division of Fuel Chemistry, **1997**, *42*(1), 38-42.

De Witt, M.J. and Broadbelt, L.J., "Binary Interactions Between Tetradecane and 4-(1-Napthylmethyl) Bibenzyl During Low and High Pressure Pyrolysis", *submitted to Energy & Fuels*.

De Witt, M.J., Dooling, D.J. and Broadbelt, L.J., "Computer Generation of Reaction Mechanisms Using Quantitative Rate Information: Application to Long-Chain Hydrocarbon Pyrolysis", *to be submitted to Ind. Eng. Chem. Res.*

Broadbelt, L.J. (Editor), Waste Reduction and Recycling, Catalysis Today, **1998**, *40(4)*.

Broadbelt, L.J., "Catalytic Resource Recovery From Waste Polymers", *Invited review article, accepted Catalysis,* **1999**.

De Witt, M.J. and Broadbelt, L.J., "Binary Interactions Between Polyethylene and 4-(1-Napthylmethyl) Bibenzyl", *in preparation.*

PRESENTATIONS

Broadbelt, L.J., "Polymer Resource Recovery Through Coprocessing", Invited Lecture, Department of Civil Engineering, Northwestern University, Evanston, IL, April **1997**.

De Witt, M.J. and Broadbelt, L.J., "Coprocessing of Polymeric Waste with Coal: Reaction of Polyethylene and Coal Model Compounds", Annual Meeting of the American Chemical Society, Division of Fuel Chemistry, San Francisco, CA, April **1997**.

Broadbelt, L.J., Woo, O.S. and De Witt, M.J., "Polymer Resource Recovery Through Coprocessing: Thermal and Catalytic Chemistry", Invited Lecture, Catalysis Club of Chicago, Chicago, IL, April **1997**.

Broadbelt, L.J., "Polymer Resource Recovery Through Coprocessing: Thermal and Catalytic Chemistry", Invited Lecture, Department of Chemical Engineering, The Ohio State University, Columbus, OH, May **1997**.

De Witt, M.J. and Broadbelt, L.J., "Coprocessing of Polymeric Waste with Coal: Reaction of Polyethylene and Coal Model Compounds", Annual Scientific Meeting of the Center for Catalysis and Surface Science, Evanston, IL, September **1997**.

Broadbelt, L.J., "Polymer Resource Recovery Through Coprocessing: Thermal and Catalytic Chemistry", Invited Lecture, Department of Chemical Engineering, North Carolina State University, Raleigh, NC, October **1997**.

Broadbelt, L.J., "Recent Developments in Computer Generated Reaction Mechanisms", Invited Lecture, Workshop on Complex Reaction Mechanisms, UOP, Des Plaines, IL, March **1998**.

Broadbelt, L.J., "Polymer Resource Recovery Through Coprocessing: Thermal and Catalytic Chemistry", Invited Lecture, Engelhard Corporation, April, **1998**.

De Witt, M.J. and Broadbelt, L.J., "Coprocessing of Polymeric Waste with Coal: Reaction of Polyethylene and Coal Model Compounds", AIChE Annual University Night, Evanston, IL, April **1998**.

De Witt, M.J. and Broadbelt, L.J., "Coprocessing of Polymeric Waste with Coal: Reaction of Polyethylene and Coal Model Compounds", Catalysis Club of Chicago Spring Symposium, Chicago, IL, May **1998**.

De Witt, M.J. and Broadbelt, L.J., "Coprocessing of Polymeric Waste with Coal: Reaction of Polyethylene and Coal Model Compounds", Annual Scientific Meeting of the Center for Catalysis and Surface Science, Evanston, IL, September **1998**.

De Witt, M.J. and Broadbelt, L.J., "Coprocessing of Polymeric Waste with Coal: Reaction of Polyethylene and Coal Model Compounds", AIChE Annual Meeting, T1002, Miami Beach, FL, November, **1998**.

Broadbelt, L.J., De Witt, M.J. and Dooling, D.J., "Computer Generation of Reaction Mechanisms Using Quantitative Rate Information", AIChE Spring Meeting, Houston, TX, March, **1999**.

Broadbelt, L.J., De Witt, M.J. and Dooling, D.J., "Computer Generation of Reaction Mechanisms Using Quantitative Rate Information", AIChE Annual University Night, Evanston, IL, April **1999**.

STUDENT SUPPORT

Matthew J. De Witt, Ph.D. Candidate
Michael Dennis, Undergraduate Research Assistant
Daniel Prekup, University Coal Research Intern